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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/539,712	02/22/2006	David Charles Aslin	3427-IUS	2918
23638 7590 08/19/2009 ADAMS INTELLECTUAL PROPERTY LAW, P.A. Suite 2350 Charlotte Plaza 201 South College Street CHARLOTTE, NC 28244				
EXAMINER ANTHONY, JOSEPH DAVID				
ART UNIT		PAPER NUMBER		
1796				
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08/19/2009		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/539,712

**Applicant(s)**

ASLIN, DAVID CHARLES

**Examiner**

Joseph D. Anthony

**Art Unit**

1796

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 01 May 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-946)
- 3) ☒ Information Disclosure Statement(s) (PTO/SF/ICE)  
Paper No(s)/Mail Date 9/23/05
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Election/Restrictions***

Applicant's election with traverse of wherein the resin is an emulsion of styrene/acrylic copolymer in the reply filed on 5/1/09 is acknowledged. The traversal is on the ground(s) that "the resins of Claim 2 share the common physical property of" having a solubility parameter of within substantially  $0.5 \text{ (cal cm}^{-3})^{1/2}$  of the solubility parameter of the polymeric material," as required in Claim 1, and thus are directed to a single general inventive concept." This argument is found persuasive and the election of species requirement has thus been dropped.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 2 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The resin species "vinyidene vinyl chloride copolymer" is deemed to be indefinite because the word "vinyidene" seems to be misspelled. The correct spelling of said word is deemed to be —vinylidene—. Correct is required.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-2 and 9-12 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over JP 4356543 as abstracted by applicant's filed English Language abstract optionally in view of JP3167237 as abstracted by applicant's filed English Language abstract.

The English language abstract of JP 4356543 teaches conductive and dielectric resin foaming particles, preferably **polystyrene prefoamed particles**, which are **coated with a graphite powder** with the aid of a polymer emulsion adhesive, preferably a **styrene-acrylic resin emulsion**. The said formed conductive and dielectric resin foaming particles are subsequently used for conductive cushioning materials. Applicant's claims are deemed to be anticipated over said disclosure. It needs to be noted that the process of forming the cushioning materials from the said formed conductive and dielectric resin foaming particles would employ a heating step to allow the polystyrene particles to further expand and fuse together. The graphite coating material would not normally expand at the lower heating temperature that caused the polystyrene particles to further expand, thus meeting the limitations of applicant's claim 12.

In the alternative, the English Language abstract of JP 4356543 is confusing in regards to the interpretation of whether the graphite powder used was expandable/exfoliable graphite powder. In case the graphite powder used was not expandable/exfoliable graphite powder, JP 4356543 is taken in view of JP3167237 as abstracted by applicant's filed English Language abstract.

JP3167237, as abstracted by applicant's filed English Language abstract, teaches the production of fire retardant polystyrene resin foamed products by mixing partially foamed polystyrene resin beads with heat-expandable graphite coated with a film-forming resin. Said heat-expandable graphite coated partially expanded polystyrene beads are subsequently further heated to foam further and to make the final fire retardant material.

It would have been obvious to one having ordinary skill in the art to use the disclosure of JP3167237 as strong motivation to use heat-expandable graphite in lieu of non-heat-expandable graphite in the process of making JP 4356543's conductive and dielectric resin foaming particles for the benefits that such would impart.

Claims 3-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 4356543 as abstracted by applicant's filed English Language abstract optionally in view of JP3167237 as abstracted by applicant's filed English Language abstract, said optional combination further in view of Chaudhary et al. U.S. Patent Application Publication No.: 2002/0107315 A1 or Stevens et al. U.S. Patent Number 6,087,447.

This rejection builds on the rejection made above. JP 4356543, as abstracted by applicant's filed English Language abstract, differs from applicant's claimed invention in that there is not a direct disclosure to the further inclusion of halogenated flame retardants and flame retardant synergists.

Both secondary references directly disclose the preferably addition of halogenated flame retardant, such as hexabromocyclododecane and flame retardant

synergists, such as tungsten trioxide and/or molybdenum trioxide, see sections[0081]-[0083] and [0084] of Chaudhary et al. and column 9, lines 31-67 of Stevens et al..

It would have been obvious to one having ordinary skill in the art to use the disclosure of either secondary reference as strong motivation to add hexabromocyclododecane and tungsten trioxide and/or molybdenum trioxide in the process of making the conductive and dielectric resin foaming particles of JP 4356543 for the benefits that they would impart to the product.

***Prior-Art Cited But Not Applied***

Any prior-art reference which is cited on FORM PTO-892 but not applied, is cited only to show the general state of the prior-art at the time of applicant's invention.

***Examiner Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Joseph D. Anthony whose telephone number is (571) 272-1117. If attempts to reach the examiner are unsuccessful, the examiner's supervisor, Harold Pyon, can be reached on (571) 272-1498. The centralized FAX machine number is (571) 273-8300. All other papers received by FAX will be treated as Official communications and cannot be immediately handled by the Examiner.

**/Joseph D. Anthony/  
Primary Patent Examiner  
Art Unit 1796  
8/17/09**